

Department of Chemistry and Biochemistry

Faculty Name : Dr. Apurva Kumar R Joshi

Specialization : Biochemistry



Education

- Highest: PhD Biochemistry (2011)

Work Experience

- 1. Assistant Professor (Department of Chemistry and Biochemistry), Jain (Deemed to be University)- April 2019 to present
- 2. Scientist, Biotech Start-up, Mysore (Feb 2018-March 2019)
- 3. SERB-Young Scientist, National Institute of Nutrition, Hyderabad (Dec 2015 to Feb 2018)
- 4. Research Associate, NIMHANS, Bangalore (May 2013 to Dec 2015)
- 5. Project Assistant (level IV), CSIR-CFTRI, Mysore (Aug 2012 to April 2013)
- 6. Research Fellow, CSIR-CFTRI, Mysore (2005-2010)

Key Areas of Research interest

- 1. Metabolic Homeostasis
- 2. Mechanistic Toxicology
- 3. Nutraceuticals

Publications

1. Nair, Diya S., Digumarthy Niharika, Aishwariya Madhavan, Shweta Sharma, and **Apurva Kumar Ramesh Joshi** (2021). Recent updates on antidiabetic and antiobesity potential of carnosic acid. *EXCLI Journal* 20, 1476-1481.
2. Aishwariya M, Kusuma M, Vaishnavi R, **Apurva Kumar Ramesh Joshi.**, (2020). Mitigation of metabolic dyshomeostasis by glucocorticoid- receptor antagonism: insights from animal and human studies. *EXCLI Journal*, 19, 1266-1274.
3. Nagaraju, R., **Apurva Kumar Ramesh Joshi.**, Vamadeva, S., & Rajini, P. S., (2020). Effect of chronic exposure to monochrotophos on white adipose tissue in rats and its association with metabolic dyshomeostasis. *Human & Experimental Toxicology*, 39 (9), 1190-1199.
4. Kiran Kumar DJ, Rama T, **Apurva Kumar R Joshi.** In silico exploration of acetylcholinesterase modulatory effects of lignans: a hypothetical view. *Journal of Advanced Scientific Research*, 11, 227-231
5. Nagaraju, R., **Apurva Kumar Ramesh Joshi.**, Vamadeva, S. G., & Rajini, P. S., (2020). Deregulation of hepatic lipid metabolism associated with insulin resistance in rats

subjected to chronic monocrotophos exposure. *Journal of Biochemical and Molecular Toxicology*, 34 (8) e22506.

6. **Apurva Kumar Ramesh Joshi**, Raju Nagaraju, Padmanabhan Sharda Rajini. (2020) Is acetylcholinesterase inhibition in *Caenorhabditis elegans* at sub-lethal concentrations predictive of hyperglycemic potential of anticholinesterase agents? *Journal of Punjab Academy of Forensic Medicine & Toxicology*, 20(1), 61-66

7. Raju Nagaraju, **Apurva Kumar R Joshi**, Vahini Raidu, Deepika Thappatla, Bhaskarachari Kandlakunta, Devindra S., (2020). Incidental gluten contamination in labeled and naturally gluten free grain products in southern India. *Food Additives and Contaminants (PartA)*, 37 (4), 531-538.

8. Raju Nagaraju, **Apurva Kumar R Joshi**, Sowmya GM, Padmanabhan Sharda Rajini, (2019). Plasma paraoxonase1 activity in rats treated with monocrotophos, an organophosphorus insecticide: a study of the effect of duration of exposure. *Interdisciplinary Toxicology*, 12 (3), 129–135.

9. **Apurva Kumar Ramesh Joshi**, Omana Sukumaran Bindhu, (2019). Metabolic dyshomeostasis by organophosphate insecticides: insights from experimental and human studies. *EXCLI Journal*, 18, 479-484.

10. **Apurva Kumar Ramesh Joshi**, Raju Nagaraju, Padmanabhan Sharda Rajini, (2018). Involvement of acetylcholinesterase inhibition in paralyzing effects of monocrotophos in *Caenorhabditis elegans*. *The Journal of Basic and Applied Zoology*, 79:33, 1-7.

11. **Apurva Kumar R. Joshi**, Bhaskarachary Kandlakunta, Sandeep Kumar Kotturu, Sudip Ghosh (2018). Antigluco-corticoid potential of nutraceuticals: In silico molecular docking and in vitro assessment. *Journal of Food Biochemistry*, 42, e12522.

12. **Apurva Kumar Ramesh Joshi**, Raju Nagaraju, Padmanabhan Sharda Rajini (2018). Metabolic Dyshomeostasis in Rats Administered a Single dose of Monocrotophos is not Associated with Oxidative Damage in Liver and Kidney. *International Journal of Scientific Research in Science, Engineering and Technology*, 4, 1280-1287.

13. Shinomol, G. K., Ranganayaki, S., **Joshi, A. K.**, Gayathri, N., Gowda, H., Muralidhara, & Srinivas Bharath, M. M. (2017). Characterization of age-dependent changes in the striatum: Response to the mitochondrial toxin 3-nitropropionic acid. *Mechanisms of Ageing and Development*, 161(Pt A), 66–82.

14. Bhaskarachary, K., Vemula, S. R., Gavaravarapu, S. R. M., & **Joshi, A. K. R.**, (2016). Traditional Foods, Functional Foods and Nutraceuticals. *Proceedings of the Indian National Science Academy*, 82, 1565–1577.

15. Nagaraju, R., **Joshi, A. K. R.**, & Rajini, P. S. (2015). Organophosphorus insecticide, monocrotophos, possesses the propensity to induce insulin resistance in rats on chronic exposure. *Journal of Diabetes*, 7(1), 47–59.

16. Kisan, B., Rajini, P., Shivaya, S., **Joshi, A.**, & Shruthi, N. (2015). Kinetic studies on carboxylesterase of model nematode *Caenorhabditis elegans* Exposed in vitro to dichlorvos. *Applied Biological Research*, 17(3), 273–279

17. Jadhav, K., Shivaya, S., Prasad, H., **Joshi, A.**, Revanappa, B., Janagoundar, B., & Rajini, P. (2014). Comparative responses of acetylcholinesterase (AChE) of rat brain and model invertebrate *Caenorhabditis elegans* in vitro. *Applied Biological Research*, 16(2), 169–175

18. Nagaraju, R., **Joshi, A.K.R.**, & Rajini, P. S. (2013). Estimation of plasma triglycerides with correction for free glycerol by orlistat inhibition of lipoprotein lipase activity. *Analytical Biochemistry*, 493(1), 44–46

19. **Apurva Kumar R. Joshi., & Rajini, P. S. (2012).** Hyperglycemic and stressogenic effects of monocrotophos in rats: evidence for the involvement of acetylcholinesterase inhibition. *Experimental and Toxicologic Pathology*, 64(1–2), 115–20
20. **Apurva Kumar R. Joshi., Nagaraju, R., & Rajini, P. S. (2012).** Insights into the mechanisms mediating hyperglycemic and stressogenic outcomes in rats treated with monocrotophos, an organophosphorus insecticide. *Toxicology*, 294(1), 9–16
21. **Apurva Kumar R. Joshi., Raju, N., & Rajini, P. S. (2011).** Microplate-based kinetic method for assay of mitochondrial NADH-- and succinate--cytochrome c reductase activities. *Analytical Biochemistry*, 415(2), 209–11
22. **Apurva Kumar R. Joshi., & Rajini, P. S. (2009).** Reversible hyperglycemia in rats following acute exposure to acephate, an organophosphorus insecticide: role of gluconeogenesis. *Toxicology*, 257(1–2), 40–5
23. **Kamath, V., Joshi, A. K. R., & Rajini, P. S. (2008).** Dimethoate induced biochemical perturbations in rat pancreas and its attenuation by cashew nut skin extract. *Pesticide Biochemistry and Physiology*, 90(1), pp58- 65.

BOOK chapters:

1. K. Bhaskarachary and Apurva Kumar R. Joshi (2018)
Natural Bioactive Molecules with Anti-Diabetic Attributes: Insights into Structure-Activity Relationships In: Studies in Natural Products Chemistry. Chapter 11, Volume 57, 2018.
Editor: Atta-ur-Rahaman. Published by Elsevier
2. Mythri RB, Apurva Kumar Joshi., Srinivas Bharath MM.(2015)
Nutraceuticals and other natural products in Parkinson’s disease therapy: focus on clinical applications
In: Bioactive Nutraceuticals and Dietary Supplements in Neurological and Brain Disease: Prevention and Therapy, Ed: Watson RR and Preedy V. Chapter 44: 421-431.
3. Apurva Kumar R. Joshi and Rajini PS.(2012)
Organophosphorus insecticides and glucose homeostasis, In: Insecticides Pest Engineering, Ed: Perveen F., InTech Open Access, p63-84
<http://www.intechopen.com/books/insecticides-pest-engineering/organophosphorus-insecticides-and-glucose-homeostasis>

PhD Guidance:

Completed: 0
Ongoing: 3

Projects (External funded/Internal): 1

Patents: 1